CWS.ATR.ID.2012.KR

Annual Technical Report 2012 on Industrial Design Information Activities submitted by Republic of Korea (CWS/ATR/ID/2012/KR)

Where URLs are requested below, it is preferred that either URLs which are likely to remain stable over time (three years or more) are provided, or home (main) page URLs are provided with a short explanation of how to access the corresponding information.

The expression "industrial designs" covers industrial designs and models. Offices which issue design patents should report their design patent information activities in this series of Annual Technical Reports.

I. Evolution of registration activities

Changes experienced in terms of application filings and grants (registrations) with respect to the previous year

In 2012, the number of applications for industrial designs was 65,469, an 11.8% increase from the previous year (when measured on a multiple design basis), while the number of registered industrial designs was 47,670, representing a 9.2% increase compared to that of the previous year.

Trends or areas experiencing rapid changes with respect to the previous year

In 2012, applications for industrial design increased changing from the consecutive decrease in 2010 and 2011, while registrations have continuously increased since 2010.

URLs of web pages of the Office's website that provide statistics related to industrial designs

http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=97000&catmenu=ek07_03_01

II. Matters concerning the generation, reproduction, and distribution of industrial design documents and of secondary sources of industrial design information, i.e., official gazettes

Publishing, including printing, copying techniques and electronic printing

Gazette publication
Since July 2001, PDF gazettes of industrial designs have been published on a daily basis and made available on the website of the Korean Intellectual Property Office (KIPO) (http://www.kipo.go.kr) for three months from the date of publication. In addition, DVD-ROM versions, which include the same publications in XML and PDF formats, are distributed to 30 domestic/foreign organizations, twice a month. In 2012, 47,467 industrial design applications and registered industrial designs were published on the website and on DVD-ROMs.

Digitization Center (Data Conversion Center)
In January 2001, KIPO began operating the Digitization Center for digitizing paper-based applications and subordinate documents such as amendments, written opinions, objections, as well as registration and trial-related documents at both its Daejeon headquarters and its Seoul branch office. The center automatically receives applications, performs formality checks and data conversions on them. Delays and errors during the conversion process are avoided through the use of state-of-the-art technologies, such as, multi-OCR, dual key-inputs, automated verification of electronic data, and color-scanning technology for documents attached to applications. In 2012, the Center digitized 281,267 documents, which were a combination of 1,098 different kinds of paper-based documents, including 2,854 applications for industrial designs.

Data Management Center
Since May 2002, KIPO has been operating the Data Management Center to provide high-quality data services. The center is responsible for generating data and processing and fixing any errors found in KIPO's internal database. In 2012, its main activities were as follows:

• Database building: approximately 2.38 million domestic/foreign industrial design documents
• Publication: 47,000 industrial design gazettes on the Internet
• Dissemination: 775,000 documents of industrial designs to domestic/foreign organizations

Main types of announcements of the Office in the field of industrial design information

KIPO's Website (http://www.kipo.go.kr)
KIPO's main announcements for industrial design information are usually made through its website . Visitors of the website can refer to the PDF gazettes mentioned above and subscribers of the mailing service are provided with the gazettes relating to their interests. Other key information announced at KIPO's website is as follows:

• Announcements about notifications that couldn't be delivered to applicants, due to the changes in their postal address without informing KIPO
• Advance notice on industrial designs expiring due to the non-payment of fees
• Other notices, such as changes in laws or fees

Databases and office automation

With the launch of the KIPOnet system in 1999, Industrial Property Right (IPR) administrative processes have been computerized, including the receiving, examining, granting of applications. The system also facilitates the sending of examination results to applicants via email and SMS, publishing of official gazettes on the Internet, and handling most registration and opposition procedures online. Below are some significant developments made thereafter:

• 2003-2005 (migration to KIPOnet II): Integrated and re-designed legacy subsystems, architectures, databases as well as the adoption of middleware and workflows; integrated networks and strengthened security facilities such as EAM, ESM, and SSO; launched a 24/7, nonstop e-filing service, a work-at-home examination system, and a real-time notification service.
• 2007-2008: Through the WEB-PASS service, launched in November 2007, all types of IPR applications including industrial designs are filed on the web through KIPO's homepage and in 2008, for the convenience of users, the WEB-PASS service was configured to enable applicants to submit documents related to registration, trial or other intermediate processes online. In addition, KIPO started mailing automatic notifications to applicants.
• 2009: The e-filing portal was updated to help applicants prepare and transmit applications embedded with 3D modeling files, toward customer-oriented services. In addition, existing filing editors were integrated with a commercial MS-WORD-based editor including an enhanced fee payment system.
• 2010-2012 (migration to KIPOnet III): Launched a 24/7, nonstop examination system and an intelligent search system to assist more efficient prior art searches; started providing convenient functionalities for examinations such as drawing interpretation, electronic memos, and a citation analyzing tool; built a Server Based Computing (SBC) environment to prevent document leakages; and adopted up-to-date IT technologies such as government-standard framework, UTF-8 character set, and JAVA.

URLs of web pages of the Office's website that provide access to online industrial design gazettes and to other sources of industrial design information, including download of bulk industrial design data

http://eng.kipris.or.kr/

III. Matters concerning classifying, reclassifying and indexing of industrial design information according to the classification systems applied

Classification and reclassification activities; Classification system used, e.g., International Classification for Industrial Designs (Locarno Classification), other classification (please indicate whether industrial designs are classified by your Office and, if so, which classification is used)

KIPO uses the Korean Article Classification System for Industrial Designs. It is a unique system comprising of 13 categories and 75 main classes. Although KIPO has yet to adopt the Locarno Classification for examination activities, it cross-references the 9th edition of the Locarno Classification on official gazettes.

Bibliographic data and processing

Search indexes such as design classification, applicant name, application number/date, publication number/date and registration number/date are used. For classification input, classification code, sub-classification code, classification memos are used.

IV. Search file establishment and upkeep

File building

KIPO has a database of industrial designs, comprised of bibliographic data and images of industrial design applications dating back to 1960, including gazette data of registered industrial designs onto the Industrial Design Search System. The database also includes foreign data collected from the design gazettes of the DPMA (German Patent and Trademark Office), JPO, USPTO, WIPO and OHIM plus design-related journals and information collected from the Internet. All those databases continue to be updated for the improvement of examination quality. As of the end of 2012, it totaled 37.5 million documents comprising of 24.2 million domestic design documents and 13.3 million foreign design documents.

Storage, including mass storage media

Industrial design data is stored on disks either in Text, TIFF or SGML/XML format.

Documentation from other offices maintained and/or considered part of the available search file

In addition to the searchable data introduced under the file building and updating section above for easy public access, the official gazettes of CA, CN, GB, RU and TH are also available at KIPO's IP Digital Library on microfilm, roll film and tape cartridge.

V. Activities in the field of computerized search systems for industrial designs

In-house systems (online/offline)

Industrial Design Search System
The Industrial Design Search System enables KIPO's examiners to electronically retrieve domestic and foreign data, including gazettes, design catalogues, and typefaces from Korea, Japan and WIPO. It provides bibliographic data, images, and SGML/XML data. The system features an electronic folding screen system that analyzes the similarity between an application and its references on dual monitor set-up. Due to its convenient interface, examiners can easily move to the Examination System to prepare a notification and send it to an applicant in real time soon after the examiner finishes retrieving relevant designs, etc. In 2012, particularly, some functions below were additionally developed for user convenience of the Industrial Design Search System:

• A function of searching for representative code
• A function of searching for the responsible for examination of an application
• A function of excluding N classification (i.e., classification including classification of font, well-known marks, and public marks) when doing search for design classification
• A function of including identical applicants when doing searches for similar designs

Online Work-at-Home System
Since March 2005, a remote online work-at-home examination system has supported examiners who volunteer to work from home. They are enabled to securely access the KIPOnet system from the comfort of their homes through a VPN, fingerprint identification system, and a government public key infrastructure (GPKI). To prevent the leakage of undisclosed documents, Digital Rights Management (DRM) technology has been incorporated into the system. In an effort to make the work-at-home system more efficient and better managed, a new system was developed and incorporated into the work-at-home system in 2008. The new system facilitates the receiving of applications online from prospective work-at-home examiners, recording of their work hours and the management of the list of undisclosed documents. As of the end of 2012, three design examiners were benefiting from this system.

Administrative management systems (e.g., register, legal status, statistics and administrative support)

KIPOnet has many sub-systems that support managing data produced during the various phases of the IPR administrative processes, such as, dealing with matters that originate in the transfer of data from one phase to another and streamlining search-related administration. Below are some of those sub-systems:

General Information Management Subsystem
The General Information Management Subsystem generates a variety of statistical and policy data on industrial designs as well as trademarks, patents and utility models by using a variety of information retained by KIPO's databases. The system efficiently manages large volumes of data and provides end-users with various functions and tools.

Electronic Approval and Routing Subsystem
The Electronic Approval and Routing Subsystem enables electronic approval of IPR and general administration processes. The system is comprised of two major parts: an approval system for IPR examinations, introduced with the KIPOnet system in 1999, and an approval system for general administration, launched in June 2000. The approval system for general administration was upgraded in January 2004 and replaced with the Onnara System in January 2007. The Electronic Approval and Routing Subsystem is used for the following:

• Electronic approval: preparation, approval, dispatch, and receipt of electronic documents, management of a document box, and circulation of documents
• Electronic mail: preparation, transmission, receipt, and management of emails
• Electronic bulletin board: for the submission of posts and reviews
• Management and preservation of records

The system has a pop-up window feature, which shows messages on the approval status of documents and can be used for managing individual schedules. The electronic approval system was used for 98.85% of all of the documents approved in 2012.

Knowledge Oasis
For the efficient management of a variety of knowledge and information created by KIPO staff, the Knowledge Management System was launched in October 2001 and was renamed Knowledge Oasis (KOASIS) in 2006. KOASIS supports KIPO staff members in sharing knowledge through the bulletin board of the KOASIS website. Furthermore, it offers a keyword search function for gleaning details of approved documents and allows them to utilize various management tools, such as knowledge maps, knowledge warehouses, personalized portals, and cyber knowledge communities. In addition, the system enables KIPO to share ideas and knowledge with 18 external R&D institutes including the Electronics and Telecommunications Research Institute through an online Q&A communication corner. Some high quality information posted on KOASIS is available to the public through KIPO's homepage and private search portals like Naver. Since November 2007, it has also been linked to the Government's Knowledge Management System for more extended information sharing between government agencies. In 2008, a 'WIKI Corner' and a multi-dimensional knowledge map were built for more efficient use of KOASIS and in 2010, an integrated search function of the accumulated knowledge and a trade function of knowledge "mileage" were added to KOASIS. Particularly in 2012, legislation information including case information was included to KOASIS.

Equipment used (hardware, including the types of terminal and network used, and software), data carriers used

Hardware

As of the end of 2012, KIPOnet had 52 UNIX Enterprise servers, 98 NT servers, and 140 Linux servers. For higher availability, individual servers are clustered for the e-filing system, IPR administration system, and search system and particularly between the Homepage Server and the Portal Server. In case of system failures, the cluster paired systems temporarily substitute for each other. The combined storage capacity of the 35 servers is 1714 terabytes including 16 SANs. The peripherals consist of 7 backup devices, 3 jukeboxes and 505 sets of network equipment. The improvements made in terms of hardware performance in 2012 are as follows:

• Introduction of new IT resources and replacement of old ones for KIPOnet: 16 servers, 13 NT servers and 7 SANs
• Stabilization of KIPOnet III's Server-Based Computing (SBC) environment
• Improvement of the service stability of the public search system: a 50% increase in the disk resource use of the application server
• System optimization for the improvement of HP-UX systems by transferring the common section disk from the Network File System to the Network Attached Storage and replacing examiner search engine server with a new one for better system performance
• Inspection of the availability of those clustered e-filing/homepage systems and administration/search/general information management systems through server-duplexing tests
• Increase of the KIPOnet's stability through the installation of a security patch (4 times)

Network

In 2012, KIPO's activities to enhance network and security for the KIPOnet system include:

• Enhancement of KIPO-Cloud network: L3Switch (2 sets)
• Replacement of outdated equipment in Seoul Branch: L3Switch (1 set)
• Extension of security license for user section: L2Switch (39 sets)
• Installation of 2 sets of network analysis equipment for checking user response time between NCIA Gwangju and Seoul Branch
• Improvement of security vulnerability of communication equipment and related protective activities (4 times)
• Dualizing tests for more stable operation of network equipment including communication lines (4 times)
• SBC networking configuration for KIPOnet III: L4 Switch (4 sets), L3 Switch (4 sets)

KIPO-Cloud
• Server: Blade (94 sets), NT (15 sets), Unix (1 set)
• Storage: 10 sets (1,863TB)
• Virtual desktop PCs: 1900 sets for KIPO staff members in 2011 and 300 sets for outsourced PCT-related researchers in 2012
• System stabilization and improvement: 1) handling approximately 1500 user requests since its launch, 2) performance improvement (34-50 percent of extension in CPU and Memory, adoption of SSD for increasing the booting speed, provision of a function of one-click access), 3) structure diagnosis and improvement for the establishment of a cloud operation system (creation and completion of 13 tasks in 4 sections), and 4) check-up for the dualized system to prevent system failure

Software

For databases, performance tests and recovery practice tests are regularly conducted with support from Oracle. In addition, KIPO introduces and upgrades system software such as DBMS, web servers and middleware to improve the KIPOnet system's performance and functionality. As of the end of 2012, about 361 commercial software applications were in use. The software applications can be grouped into three major groups, as follows:

• 288 perpetually licensed software including DBMS and web servers
• 8 subscription-licensed software including Vi Robot and other security products
• 65 packaged software for KOASIS, web mail, messenger, performance management system, electronic approval system, career development management system, Call Center, DW, Homepage portal, ITA/EA, DQM, open-end statistics portal, and e-filing portal

VI. Administration of industrial design information products and services available to the public (relating to facilities, e.g., for lodging applications, registering designs, assisting clients with search procedures, obtaining official publications and registry extracts)

Planning, administration, automation, security

The Information Policy Bureau organizes comprehensive services for the public by managing the IP Digital Library and the e-Filing Portal System, while other departments support customers according to their duties and responsibilities.

e-Filing Portal System
The e-Filing Portal System was established to transform KIPO's website into an online service portal for the online community. Owing to this service, applicants can file their applications online and pay relevant fees via Internet banking and they are informed of the legal status of their applications via e-mail and/or SMS. They can also request and receive certificates such as priority certificates via the Internet and check the progress of their request. In addition, a public service for informing applicants of the time of their applications' examination in advance, has been made available since October 2006. Moreover, individual applicants can be informed of the status of their application via email or SMS, while enterprises through a HTML-based service titled "How is my application going?" and universities, institutes and IP law firms can do the same through a SOAP-based web service. This e-Filing Portal System is linked to the WEB-PASS, which is a web-based e-filing system used for receiving intermediate documents and registration/trial-related documents, as well as all kinds of IPR applications. Furthermore, in 2010, 12 kinds of mobile applications were introduced into this System in accordance with the rapid proliferation of smart phone users. In 2011, for users' convenience, the e-filing software suite was unified, along with the improvement of the 'Help' function and in 2012 user authentication-related functions were enhanced.

IP Digital Library
The IP Digital Library located at KIPO's headquarters supports its customers by enabling them to search for industrial design information in a variety of formats including online, microfilm, and paper, as well as of journals and magazines the Library possesses. They can also order copies of published applications for industrial designs as filed.

Customer Service Center
To integrate scattered counseling resources and promptly provide technical advice, the Customer Service Center was established in March 2002. Its main services are on the following issues:

• Procedural and technical advice on (electronic) filing, examination, registration, trial, search and use of design information
• Use of the Expert System (e-filing support system) and remote consultation
• Consultation through mobile Web/App or Twitter
• Angel Call service to inform applicants in advance that their applications will be closed, suggesting reasonable solutions

Security
In 2012, the establishment of SBC environment was completed, which was initiated for the purpose of the enhancement of the security of patent information.
Against external attack threats, network-based security systems such as UTM, Firewall, IPS, and VPN have been utilized. In addition, DB security tools are used for preventing illegal access to confidential unpublished databases and the extended application of SecureOS is also useful for authorization control to servers.
KIPOnet won the ISO 27001 certification in 2006, recognizing its highly secure web services for applicants, SecureOS for servers, individual information protection marks, and secure site mark. Accordingly, among government departments, KIPO has won the top spot in security assessment consecutively (from 2009 to 2012) and in personal information protection in 2012.

Collection management, preservation

IP Library
The IP Digital Library archives industrial design documents, such as, bibliographic data, abstracts and full texts collected from five countries and one international organization in a variety of media such as, paper, microform and CD-ROM/DVD-ROM. The library also possesses 9,282 volumes of journals, four kinds of catalogues including Elegance and Spiegel.

Information services available to the public (including computerized services and search files contained in libraries remote from your Office and industrial design information posted by your Office on the World Wide Web)

Korea Industrial Property Rights Information Service (KIPRIS)
Since January 2001, domestic industrial design information has been made available free-of-charge through KIPRIS at http://www.kipris.or.kr: bibliographic data (in text format from 1948), images (in JPG format from 1948), and gazette data (in TIFF format from 1964 to 1997 and in PDF /XML from 1998 onwards). This service also covers up-to-date information on the legal status of applications for industrial designs and statistical information. In terms of its functions, the service offers a view function for hexagonal drawings, a Korean to English (and English to Korean) translation service, sorting function for search results, and popular search queries. In 2012, KIPO's main activities to improve the service quality of KIPRIS were as follows:

• Launching of a mobile search service for domestic designs
• Production of a video manual for design searches and provision of a search service for novice searchers

URLs of web pages of the Office's website for electronic filing of industrial design applications

http://www.patent.go.kr

URLs of web pages of the Office's website that provide information on business procedures such as: filing, publication, examination and registration procedures related to industrial designs; opposition and appeal procedures related to industrial designs; etc.

http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=93001&catmenu=ek04_01_02

URLs of web pages of the Office's website that provide a description of information products and services offered by the Office (e.g., industrial design search service(s) and industrial design databases), as well as information on how to access and utilize them

http://eng.kipris.or.kr

VII. Matters concerning mutual exchange of industrial design documentation and information

International or regional cooperation in the exchange of industrial design information, e.g., in the form of official gazettes

KIPO distributes its official gazettes on industrial designs via DVD to 19 Industrial Property Offices (IPOs) including the AU, CA, DE, FR, IT, JP, PH, SE, SG, and US. KIPO also receives official gazettes on CD-ROMs from IPOs of Japan, Romania, Russia, and WIPO.

VIII. Matters concerning education and training, including technical assistance to developing countries (please indicate URLs of web pages of the Office's website wherever appropriate)

Promotional activities (seminars, exhibitions, visits, advertising, etc.)

2012 Trademark-Design Exhibition (Nov.29 – Dec. 2, 2012)
Since 2006, KIPO has been holding an annual trademark and design exhibition for raising public awareness of the importance of trademarks and designs as intellectual property rights, ultimately aiming that enterprises can make successful management strategies for trademarks and designs to strengthen their competitiveness. In 2012, as with last year's, the exhibition displayed themes such as the Easy Trademark and Design Explanation, New Trends in Trademarks and Designs, Best Brand Contest Award, Original/Counterfeit Experience, Trademark/Design Rights Conflict Cases, and Non-English-Speaking Countries' Brands.

Training courses for national and foreign participants

International Intellectual Property Training Institute
In 1987, the International Intellectual Property Training Institute (IIPTI) was established in Seoul as an affiliate of KIPO. It initially offered 11 IPR training courses. In February 1991, it moved to the Daedeok Science Valley in Daejeon with the support of WIPO and the United Nations Development Programme. In 2012, the IIPTI ran 11 courses for foreign trainees including international seminars and training courses in conjunction with WIPO and the Korea International Cooperation Agency and customized training courses for 172 trainees from approximately 46 countries, including Indonesia, Malaysia, and Vietnam.

IX.Other general information related to the Office that is available on the Internet -- URLs of web pages of the Office's website that:

provide information on legislation related to industrial designs

http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=60201&catmenu=ek07_02_01

contain the Annual Report of the Office

http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=60111&catmenu=ek07_01_01

contain industrial design-related news regarding the Office

http://www.kipo.go.kr/kpo/user.tdf?a=user.english.board.BoardApp&board_id=kiponews&c=1001&catmenu=ek06_01_01

X. Other relevant matters